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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HUANG, SIHONG	
ART UNIT	**PAPER NUMBER**
2632	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/954,700	GISSELBERG ET AL.	
	Examiner	Art Unit	
	Sihong Huang	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) *23 and 27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22 and 24-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to the amendment filed on Dec. 15, 2004. As directed by the amendment, independent claims 19, 24 and 25 are amended, and no new claim is added. Thus, claims 1-22 and 24-26 are presently pending in this patent application with claims 1, 19, 20, 21, 22, 24, 25 and 26 being the independent claims.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Hansen (US Pat. No. 4,618,822).

Regarding claim 24, Hansen discloses a resonating marker assembly (10), comprising: a ferromagnetic core (11) having a first end (left end of marker 10, see Fig. 1) and a second end (12); a wire coil (13) disposed around the ferromagnetic core; a capacitor (15) positioned at the first end of the core (left end of marker 10, see Fig. 1); and an axially adjustable segment (free end 12) at the second end (right end of marker 10, see Fig. 1) of the core that projects outwardly with respect to the longitudinal axis of the core (the cross-section of 12 is larger than the core 11, see Fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann et al. (US Pat. No. 3,836,842).

Regarding claims 1 and 12, Zimmermann et al. (hereinafter Zimmermann) discloses a resonating marker assembly (see Figs. 1a, 1b and 1c), comprising: a signal element (Fig. 1c) comprising a core (5), a wire coil (4) disposed around the core, and a capacitor (6) connected to the wire coil, the signal element generating a magnetic field with a selected resonant frequency in response to a specific stimulus (col. 4, lines 44-68), and the magnetic field having a magnetic center along a first axis of the core (inherently included property); and an inert encapsulation member (3) encapsulating the signal element, the encapsulation member and the signal element therein defining a unit having a selected geometric shape having a geometric center (inherently included property). Although Zimmermann does not specifically spell out that the geometric center being coincident with the magnetic center along at least the first axis of the core, it appears that Zimmermann in Fig. 1b shows such limitation. Zimmermann does not disclose a miniature assembly. However, the size of the resonating marker assembly is proportional to its signal strength for communicating with the interrogator. Depending on the specific

application, smaller size resonating marker assembly with smaller size electrical elements that provides a shorter communication range is do-able. And therefore, it would have been obvious to an ordinary person skilled in the art that the resonating marker assembly of Zimmermann can be made smaller in size for different application such as that it does not require long range communication path between the interrogator and the resonating marker assembly.

Regarding claims 2 and 3, Zimmermann discloses a ferrite magnetically soft core which has high permeability greater than 1.0 (col. 5, lines 52-53).

6. Claims 4-9 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann et al. in view of Taylor et al. (US Pat. No. 5,211,129) or Mejia et al. (US Pat. No. 6,400,338).

Regarding claims 4-6, Zimmermann does not disclose that the core has a rod portion positioned within the coil and a pair of enlarged ferromagnetic endcaps connected to the rod portion, the endcaps having a relative permeability greater than 1, the coil disposed between the endcaps. However, Taylor et al. (hereinafter Taylor) discloses such (see Fig. 8B and col. 8, lines 17-22), and further in Figs. 8A, 8C and 8D discloses other variations (with or without core endcaps) on the embodiment. Mejia et al. (hereinafter Mejia) discloses that providing a reduced sized center portion with enlarged end portions to hold the coil within the center portion of the core is a well known technique in the art (see Figs. 1 and 3). Thus, it would have been obvious to an ordinary person skilled in the art to modify the core of Zimmermann with the teaching of Taylor or Mejia to have the claimed shape so that the coil would be held within the reduced cross-section center rod

portion due to the enlarged end portions. Since both Taylor and Mejia consider the center and end portions being the core, the material of the end portions would have permeability greater than 1.

Regarding claims 7-9, since Mejia discloses a unitary antenna core 12 (including coil-forming portion 16 and IC support portion 18 with a same ferrite material), the volume of material at one end (the end with IC support portion 18) of the core 12 is larger than the other end (the left side of the figures). Thus, it would have been obvious to an ordinary person skilled in the art to modify the core of Zimmermann with the teaching of Mejia to provide a unitary core with an extended support from the core for the capacitor of Zimmermann for an easier and cheaper manufacturing process (col. 7, lines 15-26) and to increase the operational range of the marker due to larger volume of core material to be used (col. 7, lines 27-40).

Regarding claims 15 and 16, the modified assembly does not specifically disclose how to secure/hold the windings of the coil in position onto the core. However, the claimed methods/techniques are known in the art and therefore an obvious modification to the modified assembly.

Regarding claims 17 and 18, since the assembly of Zimmermann can be modified and made miniature and implantable in or on a patient as taught by Taylor and Mejia, the claimed limitations would have been obvious to an ordinary person skilled in the art.

7. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann in view of Taylor or Mejia as applied to claims 1 and 4-8 above, and further in view of Yoakum (US Pat. No. 6,441,741).

Regarding claims 10 and 11, the modified assembly further differs from the claimed invention in that it does not disclose that the first endcap being axially adjustable over the rod portion and relative to the coil while the second endcap is fixed relative to the rod portion. However, Yoakum discloses that the position of the coil over the core is important for tuning the marker to the desired resonating frequency (col. 4, lines 30-57). Therefore, making one endcap fixed with the other being adjustable for positioning the coil over the core to tune the marker to the specific resonating frequency would have been obvious to an ordinary person skilled in the art, and such technique would have been an obvious modification to the modified assembly of Zimmermann and Taylor or Mejia.

8. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmermann in view of Yoakum.

Regarding claims 13 and 14, Zimmermann does not disclose a sleeve positioned between the wire coil and the core, the wire coil being wound onto the sleeve, and the sleeve and coil being positioned over the core, wherein the core is disposed within the sleeve and axially movable relative to the coil to achieve a selected resonant frequency of the assembly. However, Yoakum discloses such (col. 4, lines 23-57). Therefore, it would have been obvious to an ordinary person skilled in the art to provide the technique taught by Yoakum to the assembly of Zimmermann for an easier tuning step.

9. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mejia et al. (US Pat. No. 6,400,338).

Regarding claim 20, Mejia discloses a resonating marker assembly (10) having a geometric center (inherently included), comprising: a ferromagnetic core (12) having an

elongated central portion (16, see Figs. 1, 2A and 3) and first and second ferromagnetic endcaps (for example, left endcap 42, right endcap 42, 44 and/or 18 of Fig. 1, also see Figs. 2A and 3) at opposite ends of the central portion, the core being substantially symmetrical about a longitudinal axis of the core, and being asymmetrical about a lateral axis of the core (clearly shown in Figs. 1, 2A and 3); a wire coil (22) disposed around the central portion (16) of the ferromagnetic core (12) intermediate the first and second endcaps (42, and 42, 44 and/or 18); and a capacitor (28) connected to the wire coil forming a signal element that generates a magnetic field with a selected resonant frequency in response to a specific stimulus (see col. 1), the magnetic field having a magnetic center along a first axis (inherently included property). Mejia differs from claim 20 in that Mejia does not disclose that the magnetic center along a first axis coincident with the geometric center of the resonating marker assembly. However, Mejia in col. 4, lines 28-64 discloses that the unitary core can be configured differently including the modification of the shape of the IC support portion 18, transition portion 44 and center portion 36. It is also known in the art that a transponder or resonator can comprise merely a core, wire wounds around the core and connected to a capacitor without an IC chip. Therefore, it is possible that the magnetic center can be coincident with the geometric center of the resonating marker assembly of Mejia by modifying the shape or configuration of the unitary core of Mejia. For example, by reducing the size (get rid of the IC) and changing the configuration of the IC support portion 18, no transition portion 44, and modifying the right endcap 42 and/or the left endcap 42. Thus, it would have been obvious to an ordinary artisan to make the resonating marker

assembly of Mejia with the magnetic center coincident with the geometric center of the marker assembly for an accurate resonating marker assembly.

Regarding claim 26, Mejia discloses a resonating marker assembly comprising: a capacitor (28), an elongated ferromagnetic core (12), a wire coil (22) and an inert encapsulation member (34) encapsulating the capacitor, the core and the coil (see Figs. 8-10). Mejia differs from claim 26 in that it does not disclose the specific arrangement/position of the capacitor, core and coil. However, such specification is merely a matter of design choice on packaging and well known in the art and therefore an obvious modification to the assembly of Mejia.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mejia et al. (6,400,338 B1) in view of Yoakum (6,441,741 B1).

Regarding claim 21, Mejia discloses a resonating marker assembly as addressed above and differs from claim 21 in that it does not disclose the first endcap being movable relative to the coil and capacitor for tuning the marker assembly to a selected resonant frequency. However, it is well known in the art and disclosed by Yoakum that the position of the coil over the core is important for tuning the marker to the desired resonant frequency (col. 4, lines 30-57). The specific way to tune the resonating marker (e.g., adjusting the position of the coil to the core) is merely a matter of engineering design choic. Therefore, making one endcap adjustable/moveable for positioning the coil over the core to tune the marker to the specific resonant frequency would have been obvious to an ordinary person skilled in the art, and such technique would have been an obvious modification to the assembly of Mejia.

11. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoakum (US Pat. No. 6,441,741 B1) in view of Taylor et al. (US Pat. No. 5,211,129) or Mejia et al. (US Pat. No. 6,400,338 B1).

Regarding claim 22, Yoakum discloses a resonating marker assembly (10), comprising: a sleeve (26); a core (30) having a central portion extending through the sleeve (see Fig. 1), and the core being axially movable relative to the sleeve (col. 4, lines 19-57); a wire coil (18, 20) disposed around the sleeve (see Fig. 1); and a capacitor (16) connected to the wire coil proximate to the core to form a signal element that generates a magnetic field with a selected resonant frequency in response to a specific stimulus, the core being axially movable relative to the sleeve and the coil for tuning the marker assembly to a selected resonant frequency (col. 4, lines 19-57). Yoakum does not disclose a pair of endcaps. However, Taylor (in Figs. 8A-8C) and Mejia (in Figs. 1, 2A, 3, 8 and 10) disclose such well known feature. Accordingly, one ordinary artisan would have been motivated to employ such well known feature to the apparatus of Yoakum because the endcaps further secure and prevent movement of the coil over the core. Therefore, it would have been obvious to an ordinary person skilled in the art to modify the core of Yoakum to include endcaps as taught by Taylor and Mejia so that the coil with the sleeve is securely positioned over the core to prevent variation in the marker's resonating frequency.

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mejia et al. (6,400,338 B1) in view of Hansen (US Pat. No. 4,618,822).

Regarding claim 19, Mejia discloses a miniature resonating marker assembly (10) having a geometric center (inherently included), comprising: a core (12) having an elongated central portion (16, see Figs. 1, 2A and 3), a first cap (42, left side of coil-forming portion 16) having a first thickness, and a second cap (including end portion 42, transition portion 44 and IC support portion 18, see the right side of coil-forming portion 16 in Figs. 1, 2A, 3 and 9A) having a second thickness (see figures), wherein the first thickness is different than the second thickness (clearly shown by the drawings); a wire coil (22) disposed around the central portion (16) of the core between the first and second caps; and a capacitor (28) connected to the wire coil operative to form a signal element that generates a magnetic field with a selected resonant frequency in response to a specific stimulus (see col. 1). Mejia differs from claim 19 in that it doesn't disclose that the first cap is movable relative to the coil and capacitor for tuning the marker assembly to a selected resonant frequency. However, Hansen discloses such movable cap 12 (see Fig. 1), and the movement results in a different resonant frequency (see abstract). Since the transponder of Mejia need to be tuned to the selected resonant frequency before it is positioned and encapsulated, and the configuration of the core of Mejia can be modified (col. 4, lines 28-64), one ordinary artisan would have been motivated to employ the movable end cap as taught by Hansen to the transponder of Mejia because it provides an easier way to tune the transponder to a selected resonant frequency. Thus, it would have been obvious to an ordinary person skilled in the art at the time of the invention was made to provide a movable cap to the core of Mejia with the teaching of Hansen so that the desired resonant frequency can be easily tuned.

13. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemberger (US Pat. No. 4,087,791) in view of Taylor et al. (US Pat. No. 5,211,129).

Regarding claim 25, Lemberger discloses a resonating marker assembly (10, see Fig. 1), comprising: a core (18); a wire coil (16) disposed around the core (see Fig. 1); a capacitor (20) operatively connected to the wire coil to form a signal elements (14) that generates a magnetic field with a selected resonant frequency in response to a specific stimulus; and an inert encapsulation member (12) encapsulating the core, the wire coil, and the capacitor forming an activatable unit implantable in a patient through an introducer needle (see abstract). Lemberger differs from claim 25 in that it does not disclose a pair of enlarged endcaps having different magnetic permeability. Taylor also discloses implantable resonating marker assembly with or without enlarged endcaps (see Figs. 8A-8E). Accordingly, one of ordinary artisan would have been motivated to provide enlarged endcaps to the core of Lemberger with the teaching of Taylor because enlarged endcaps provide better positioning for the coil over the core. Thus, it would have been obvious to an ordinary artisan at the time of the invention was made to provide enlarged endcaps to the core of Lemberger with the teaching of Taylor for a more accurate resonating marker assembly due to the firm position of the coil over the core by the enlarged endcaps. Whether or not the endcaps and the core are made from a same material is merely a matter of design choice depending on the cost of the material as well as the complexity of manufacturing process, and therefore an obvious modification to the combination of Lemberger and Taylor.

Response to Arguments

14. Applicant's arguments filed 12/15/04 have been fully considered but they are not persuasive.

Response to Argument Toward Zimmermann Applied to Claims 1-18 Rejections

Applicants argued on pages 12-14 (Sections C and D) that Zimmermann does not disclose that the magnetic center is coincident with the geometric center for the reason stated on pages 13-14 of the remarks. However, the position of the coil (or number of windings) over the core depends on the value of the capacitor and the required/desired resonating frequency (see Yoakum for the teaching of tuning a transponder by adjusting the position of the coil over the core). Therefore, depending on the desired resonating frequency, the position of the coil or number of windings over the core can be different which leads to the possibility of coinciding the magnetic center and geometric center as claimed in claim 1. Fig. 1b of Zimmermann appears to show such coincidence. Even if it is not, it's possible depending on the desired resonant frequency for the reasons discussed above. Therefore, the 103 rejection to claim 1 is proper.

Applicants further argued on pages 14-15 that Zimmermann's device is not a small transmitter for use in human patients to perform medical procedures. First of all, claim 1 does not require the claimed miniature resonating marker assembly to be used in human patients to perform medical procedures (e.g., implant). Claim 1 merely states in the preamble that it is a miniature resonating marker assembly without any description of the use of the assembly. Secondly, as indicated in the rejection above, the size is proportional to the signal strength for communications to and from an interrogator, and

therefore is modifiable if short communication range (weaker signal strength) would give a smaller size device is desired. Applicants in the specification disclosed such common knowledge as well (see [0050] of PG Pub No. 2003/0052785 A1 of the present invention). Finally, Lemberger (US Pat. No. 4,087,791) in Fig. 1 shows a miniature, implantable resonating marker assembly appears to have the magnetic center coincident with the geometric center. Lemberger is cited here to support the examiner's position. Thus, the rejection to claim 1 is proper. Dependent claims 2-18 depend from base claim 1 and argument is based on claim 1 toward the Zimmermann patent. Thus, refer to the response to claim 1 for reasoning.

Response to Argument Toward the Mejia Patent to claims 20 and 26

Referring to the claim 20 rejection argument on pages 16-17, applicants argued that Mejia does not disclose the magnetic center point coincident with the device's geometric center point. As addressed in the rejection above, since the unitary core of Mejia can be modified, the position of the coil (or number of windings) over the core depends on the desired resonating frequency and the value of the capacitor (meaning that the position of the coil over the core can also be modified), it is possible that the magnetic center can be coincident with the geometric center. See the rejection above for further details.

Referring to claim 26 rejection argument on pages 17-18, applicants argued that the Mejia patent does not disclose the claimed arrangement of the capacitor, core and coil. However, such specific arrangement of the capacitor, core and coil is merely a matter of engineering design choice on packaging and known in the art. Murata et al.

(US Pat. No. 6,492,885 B1) is cited here to support the examiner's position. Murata discloses a capacitor 18, coil 16 and core 11 with capacitor 18 located in the center and connected to the coil 16 from both sides of the capacitor, the coil wounds around the core 11, see all drawings.

Response to Argument Toward the Rejection of Claim 21 over Mejia in view of Yoakum

Applicant on page 18, section F argued that the tag of Mejia can not be modified to make one endcap adjustable for positioning the coil over the core to tune the marker. However, as discussed above, the unitary core of Mejia can be modified to have different shape or configuration (col. 4, lines 28-64), Yoakum teaches that tuning the tag can be accomplished by adjusting the position between the coil over the core. A specific way to adjust or tune a tag/marker (such as by moving an endcap as claimed) is merely a matter of engineering design choice and therefore an obvious modification to the Mejia device. Hansen (US Pat. No. 4,618,822) is cited here to further support the examiner's position. Hansen discloses a movable endcap 12, core 11, coil 13 and capacitor 15, see Fig. 1, change in the displacement of the endcap 12 provides a different resonant frequency from the marker 10. Thus, a movable endcap for changing/tuning the resonant frequency of the marker is clearly taught by Hansen and is known in the art.

Response to Argument Toward the Rejection of Claim 22 over Yoakum in view of Taylor or Mejia

Applicants on page 19 argued that it is not obvious to modify Yoakum's transponder to include endcaps for the reasons stated on page 19. However, Taylor in Figs. 8A-8E discloses different configurations of a transponder (with one or two or

without endcaps). The endcaps of Fig. 8B of Taylor have a same cross-section diameter as the center portion with the coil and capacitor 54 is connected and attached on one of the endcap which configuration is really similar to Fig. 6 of Yoakum and it would not block molding material 32 or need to change to different molding machine. Thus, the modification to the transponder of Yoakum to include endcaps for the reason stated in the rejection would be obvious and the rejection is proper.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Endo et al. (6,229,444 B1) is cited to show a resonating tag assembly comprising a capacitor and coil both buried in the recess in the core, and the magnetic center is coincident with the geometric center of the tag (see Fig. 7 and col. 10).

Senba et al. (2004/0052034 A1) is cited to show a microminiaturized RFID tag comprising a core, coil and IC chip 4 and the magnetic center is coincident with the geometric center of the assembly (Fig. 1b, 2 and 4).

Blair et al. (6,026,818) is cited to show a tag comprising a core 2, coil 2a, a capacitor 2b and an encapsulation member 3. The geometric center of the assembly 3 appears to be coincident with the magnetic center (see Fig. 1).

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sihong Huang whose telephone number is 571-272-2958. The examiner can normally be reached on Mon, Thu & Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sihong Huang
April 29, 2005

DANIEL WU
SUPERVISORY PATENT EXAMINER
05/02/05